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AUTHOR Shamo, G. Wayne
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ABSTRACT

A regional replication of the Williams Study of teacher evaluation of children's speech was attempted, using the same 40 language tapes as stimuli for 87 elementary school teachers, both black and white, from the Memphis, Tennessee, school district. During listening sessions, conducted during a teacher inservice program, subjects were asked to listen to the speaker for a few seconds and then complete one set of 22 semantic differential scales on each language sample. Data were subjected to three analyses appropriate to the three dimensions of the study--factor analysis, multiple regression analysis, and analysis of variance. Results indicated that two factors similar to the "confidence-eagerness" and "ethnicity-nonstandardness" factors observed by Williams were found, although enough differences were found in the detailed composition of factors to suspect any definiate theoretical model based upon the two factors. Even though the two factor model was not really definitive, similarities among evaluations by Northern and Southern teachers were striking. Partial and multiple correlations of linguistic cues indicated that even after very short exposure to a child's speech, teacher judgments tended to classify a child as being "culturally disadvantaged" if his verbal and grammatical patterns were not standard (particularly if his speech exhibited irregularities in grammar, silent pausing, and pronunciation). This stereotype was extended by the fact that such associations were also significantly related to child race. Such predictions, based on absolute ratings of both Northern and Southern teachers, were consistent across geographic boundaries. (Author/JES)

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The Psychological Correlates of Speech Characteristics of Sounding "Disadvantaged": A Southern Replication

Dr. G. Wayne Shamo, Purdue University
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One of the major concerns of educators is the problem of "culturally disadvantaged" children and their inability to achieve academic success. Many reasons have attempted to explain the problem, one of which was Bernstein's hypothesis of elaborated and restricted language codes.[1] Bernstein suggests that a child who typically comes from the "working class" home has a rather distinct, restricted of language code he uses for communication. The "average" child possesses knowledge of not only this restricted language code, but also a more elaborated one. Such an advantage permits the normal child to more readily adapt to expectations of society and increases his chances of academic success.

Recent research has indicated that when analysis of language samples from Negro and white children was done in terms of hypotheses like those expressed by Bernstein, such linguistic differences were observed and reported empirically. This research indicated that such linguistic distinctions were reflected in the speech of the so-called "disadvantaged" child in the United States.[2]

If this were true, it seems only logical that the "establishment" of the different language codes would produce just as many differences in terms of their demands (or evaluations) as would the product it illicited. For this reason, an attempt was made to link language and speech features that serve as salient cues in the speech process with whatever kinds of judgments or stereotypes the listener uses (if any)

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to categorize the speaker as "Disadvantaged". Such a model would not only further explain differences in speech production of socio-economically different speakers, but would also give possible indications of first, what standards society expected from these speakers, and second, what linguistic cues permitted such judgments.

Williams attempted to deal with this problem by developing a judgmental model of linguistic production from a set of semantic differential scales. Utilizing the forty language samples analyzed in the study cited above, he asked several elementary teachers from the inter-city schools in Chicago to fill out 22 semantic differential scales on each language sample. The forty messages were balanced so as to have equal numbers of high or low economic status, black or white, male or female, speakers on either "games" or "TV programs."

A factor analysis of the data produced by the semantic differential was used to describe dimensions of language judgment of both the socio-economic status and sex of speaker. Williams' results indicated that two factors emerged, accounting for approximately 50% of the total variance. Factor I, labeled Confidence-Eagerness, accounted for a bit over 25% of the variance, and was labeled as such because of the high factor loadings on the scales using bipolar adjectives of "Unsure-Confident", and "Reticent-Eager". Factor II was labeled Ethnicity-Non Standardness, based on factor loadings on scales relating to standardness of pronunciation and grammar for Negro teachers. A multiple regression analysis of the two factors indicated that status-judgments were related more to factor II than factor I. This was due once again to high partial correlations relating to non standard grammar and pronunciation with low economic status.

When relating the factors of socio-economic judgments to 17 language variables and child's race, the following results were observed: Selected language variables could be predictors of the status judgments, and in many instances each of these could be further identified with a dimension on the judgmental model. Among the most salient predictors were silent pausing and deviations from standard English such as pronominal apposition, main verb construction, and in the realization of selected phonemes. One major question raised about the Williams Study was: "Were the observed results obtained because of geographic location of the raters, or could the model be generalized?"

Additional data were gathered from teachers in Memphis, Tennessee school district for the purpose of a southern replication of the Williams Study to answer the following questions: (1) Could the two factor model found in the Williams Study be replicated? (2) Could teachers' judgments again be predicted from verbal and grammatical cues from the stimulus data? (3) Were northern and southern teachers similar in their absolute ratings of children?

Procedures used in the Williams Study were replicated as nearly as possible, using a different teacher population. The same forty language tapes were used as stimuli for 87 teachers drawn from elementary schools in the Memphis School District. Teachers were selected from schools containing children from both races (racially balanced), from predominately black schools, and from predominately white schools. The schools were also representative of both high and low economic status pupils. At least twelve teachers listened to each tape, with as many as 28 listening to some tapes. Because of our access to teachers as subjects, it was not possible to balance the number of listeners per

group. A composite of 54 black teachers and 33 white teachers were used.

The city school district, working with the principals of the five elementary schools, permitted the experimenters to use a portion of the teacher "in service" day, a day set aside from the regular semester when the teachers meet to discuss new programs, policies, problems, etc. One hour of testing was done in the morning and one hour of testing was done in the afternoon. At least two hours separated the two listening evaluation sessions, usually a lunch break.

During the listening session the teachers were asked to listen to the speaker for a few seconds and then complete one set of 22 semantic differential scales on each language sample. Once again the same type of instruction was given to the teachers, telling them that the purpose of the study was to evaluate children's speech containing several linguistic and grammatical variables in order to establish a base for a better teaching approach to language and speech.

The data were then submitted to three analyses: (1) a factor analysis of data from the semantic differential using an orthogonal rotation of the matrix; (2) a multiple regression analysis of linguistic and grammatical variables of the message stimuli as predictors of being "culturally disadvantaged" measured by the semantic differential; and (3) an analysis of variance among means of three variables (culturally disadvantaged, pronunciation, and being unsure), determining significant differences in evaluation of Northern and Southern teachers with regard to sex, race, and economic status of the child.

RESULTS

The Two Factor Model

Using the factor analysis of the data, two dominate factors emerged that were similar to the confidence-eagerness factor and the ethnicity-nonstandardness factor reported by Williams. Table 1 reports factor loading values of both black and white teachers for each of the twenty-two scales used in the evaluation. In factor I the black and white teachers were somewhat dissimilar in their weight of the factor, accounting for only 15% of the variance in the black teacher group (T_n) while a much higher per cent of variance was found in the white teacher group (T_w=43%). Williams reported 27% for T_n and 32% for T_w.

In examing individual factor loadings, the same kinds of observations can be made in both studies. The northern data had high loadings on the "unsure-confident" scale, and the "reticent-eager" scale, as did the southern data. The two highest predictors in the northern data were also high in the southern data, but the loadings were not as large. The other scales contributing to factor I for the southern data were fluent-disfluent, effective-ineffective language, sophisticated-unsophisticated vocabulary, and rich in detail-sparce in detail. The southern data did not report as much factor loading on "meaning of message" and "organization of message" as did the northern data.

Results of factor II were also similar to Williams' results, accounting for 21% of the variance by T_n and 13% by T_w. Williams reported 26% and 23% respectively. The northern data had high factor loadings on standardness of pronunciation and quality of grammar, with word usage, speech background, and language ethnicity also contributing to the variance. The southern data also had high factor loadings on these scales, but like factor I the loadings were a little smaller.

Prediction of Teacher Judgments Based on Verbal and Grammatical Cues

Even though the factor analysis indicated the emergence of two factors in terms of the detailed scales which loaded on each, the two factors were too different to merit a kind of one-to-one comparison of the objective correlates of the two judgmental dimensions. For this reason the scales relating of "culturally disadvantaged" was used as the dependent variable on the repression analysis. Table 2 reports the partial correlations of the seventeen language variables observed in the stimuli, along with child's race as they contributed to the variance of being judges as "culturally disadvantaged". Both the northern and southern data were reported, giving partial correlations, multiple correlations, F ratios, and a rotation of the seven variables which served on the main Predictors in each equation. The seven variable prediction was used because partial correlations beyond that point did not contribute significantly to the total variance.

Only minor differences existed in the predictive pattern of language variables between the northern and southern teachers, and these differences occurred primarily with pronunciation factors. As one example, southern black teachers not only responded to deviations of (-s) and (-z), but several comments were made during testing about this element. Northern black teachers were concerned about (θ) or (ð) and (-t) and (=d) deviations while southern blacks were not. A gross evaluation and inference based upon these coefficients is that black teachers generally seem to be more concerned with relating pronunciation to being "culturally disadvantaged" than do white teachers. White teachers, on the other hand, associated being

"culturally disadvantaged" more with child's race and with measures of clause ratio and sentence length.

Comparison of Northern and Southern Ratings

Table 3 reports regional comparisons for all cell means grouped by race, economic status, sex. As can be noted, few regional differences were observed in evaluating the tapes on the three variables checked: "culturally disadvantaged," "pronunciation," and "confident-unsure". The few significant differences that occurred were mainly found in variable 19, "confident-unsure". On this one variable it appears that the southern teachers tended to attach more significance to this evaluation than did the northern teachers. The evaluation standard with regards to the regional differences seemed to be more rigid with southern teachers than with northern teachers. No consistent pattern of difference existed among race, sex, or economic status. The southern teachers merely gave lower ratings in six of the sixteen groups while the northern teachers gave lower ratings to only one group. Only two other significant differences were observed among the remaining 32 comparisons, both of which might well have been chance occurrences since no consistency of difference was observed.

SUMMARY AND DISCUSSION

A regional replication of Williams Study of teacher evaluation of children's speech was attempted, using as subjects both black and white teachers from Memphis, Tennessee school district. Results indicated that two factors similar to the confidence-eagerness and the ethnicity-nonstandardness factors observed by Williams were found. However, enough differences were found in the detailed composition of factors

to suspect any definite theoretical model based upon the two factors.

Even though the two factor model was not really definitive, similarities among teacher evaluations of northern and southern teachers were striking. Partial and multiple correlations of linguistic cues indicated that even after very short exposure to a child's speech, teacher judgments tended to classify a child as being "culturally disadvantaged" if his verbal and grammatical patterns were not standard. This stereotyped was extended by the fact that such associations were also significantly related to child race. Such predictions, based on absolute ratings of both northern and southern teachers, were consistent across geographic boundaries. It made little difference whether the teacher was northern or southern, white or black; the child was still classified as "culturally disadvantaged" if his speech exhibited irregularities in grammar, silent pausing, and pronunciation.

The implications of this study are that the socio-economic status of a child is definitely reflected in his speech, primarily through silent pausing, nonstandard grammar, and nonstandard pronunciation. When any deviation of these variables occur, accompanied by racial association, teachers often classify the child as being "culturally disadvantaged." Such a label, carrying with it the negative connotations it has, might well place another barrier between education and society that certainly is not needed. The facial identification factor was especially high for white teachers, for their partial correlation on this variable was much higher than on any of the other seventeen variables. But probably the most disheartening fact of all is that these evaluations were made by hearing the child speak only a few minutes.

End Notes

1. Basil Bernstein, "Elaborated and Restricted Codes: Their Social Origins and Some Consequences," American Anthropologist, 66 (1964), 55-69.

2. Fredrick Williams and Rita Naramore, "On the Functional Analysis of Social Class Differences in Modes of Speech," Speech Monographs, 36 (1969), 77-102.

Table 1

Southern Data: Rotated Factor Matricies for Analyses of Negro (T_n) and White (T_w) Teacher Responses to the Semantic Differential Scales.

Variables	Factors			
	[a]I.		[b]II.	
	T_n	T_w	T_n	T_w
1. word use (incorr.)*	-.10	.53	.75	-.38
2. child is (disfl.)	-.62	.75	.36	-.20
3. child sounds (male)	.07	.01	.10	-.48
4. meaning (unclear)	-.01	.61	.56	-.02
5. pronun. (nonstd.)	-.28	.46	.68	-.58
6. sentences (simp.)	-.38	.63	.12	-.13
7. lang. (ineffect.)	-.60	.78	.45	-.24
8. family (low status)	-.27	.65	.65	-.49
9. age (seven)	.02	.18	.02	.19
10. speech (good backg.)	-.42	.67	.63	-.34
11. vocab. (unsoph.)	-.62	.65	.27	-.30
12. perspect. (speaker)	.09	.04	-.03	.01
13. message (disorg.)	-.43	.78	.54	-.09
14. sentences (frag.)	-.43	.74	.58	-.23
15. culturally (disad.)	-.39	.69	.58	-.51
16. message det. (sparce)	-.67	.80	.30	-.04
17. child is (white)	.11	-.27	-.06	.71
18. child is (reticent)	-.61	.67	.17	-.16
19. child is (unsure)	-.78	.77	.18	-.13
20. language (ethnic)	-.27	.32	.30	-.69
21. pronun. (unclear)	-.38	.68	.64	-.15
22. grammar (bad)	-.30	.66	.69	-.38
(Percentage total variance)	(17%)	(43%)	(21%)	(13%)

* Defines 1.0 end of scale.

\# % of total variance.

[a] The factor most similar to "confidence-eagerness" in the Northern data.

[b] The factor most similar to "nonstandardness-ethnicity" in the Northern data.

Table 2

Southern Data: Partial Correlations of Predictor Variables Obtained from Regression Equations of Ratings of "Cultural Disadvantage" upon Sample Characteristics

Variables	Teachers			
	Northern		Southern	
	Negro	White	Negro	White
Silent pauses	-.38[a]	-.34[a]	-.26[a]	-.39[a]
Filled pauses	-.04	-.20	-.18	-.21
Junctures per utterance	.17	.15	.10	.19
Utterance total	.10	.07	.14	-.08
Clause ratio	.06	.26[a]	.05	.28[a]
Sentence length	.06	.25[a]	.19	.38[a]
Verb construction	.08	.25[a]	.06	.15
Introductory interj.	.21[a]	.33[a]	.27[a]	.32[a]
Pronominal apposition	-.30[a]	-.17	-.31[a]	-.19
Deviations in main verb	-.13	-.27[a]	-.34[a]	-.30[a]
[-s] or [-z] deviations	-.08	-.21	-.33[a]	-.16
[θ] or [ð] deviations	-.26[a]	-.23	-.43[a]	-.38[a]
[-t] or [-d] deviations	-.23[a]	.04	.00	-.11
[m] deviations	-.21[a]	-.20	-.17	-.23
[n] deviations	-.15	-.22	-.07	-.27
[ŋ] deviations	-.02	-.12	-.10	-.22
Child's race	-.18[a]	-.50[a]	-.23[a]	-.51[a]
R =	(.66)	(.72)	(.73)	(.70)
$F_{7/72}$ =	7.8	14.9	10.6	9.4
$p <$	.01	.01	.01	.01

[a] Variables included in a seven variable prediction equation.

Table 3

Regional Comparisons of Children's Ratings on These Scales

TEACHER RACE:	Black Teachers							
CHILD STATUS:	High Status				Low Status			
CHILD RACE:	C-black		C-white		C-black		C-white	
CHILD SEX:	M	F	M	F	M	F	M	F
NORTHERN	3.8	5.4	3.8	3.9	3.0	2.3	4.0	5.3
SOUTHERN	4.1	4.8	4.8	4.2	3.0	2.8	3.5	4.7
diff.	-0.3	0.6	*-1.0	-0.3	0.0	-0.5	0.5	0.6
NORTHERN	4.3	5.2	4.6	5.2	2.8	3.0	4.3	5.3
SOUTHERN	4.6	4.7	5.3	4.5	4.0	3.7	4.2	5.0
diff.	-0.3	0.5	0.7	0.6	*-1.2	-0.7	0.1	0.3
NORTHERN	5.0	5.3	5.1	5.5	3.6	4.2	4.3	5.7
SOUTHERN	4.6	5.1	5.0	4.3	4.6	3.9	3.5	5.3
diff.	0.4	0.2	0.1	*1.2	*-1.0	0.3	*0.8	0.4

Table 3 (cont)

Regional Comparisons of Children's Ratings on Three Scales

TEACHER RACE:	White Teachers								
CHILD STATUS:	High Status				Low Status				
CHILD RACE:	C-black		C-white		C-black		C-white		
CHILD SEX:	M	F	M	F	M	F	M	F	
NORTHERN	4.0	4.7	4.7	4.9	2.4	2.8	4.0	5.1	
SOUTHERN	3.4	4.4	4.6	4.3	2.1	2.4	4.2	4.6	Variable 15 "cultur-
diff.	0.6	0.3	0.1	0.6	0.3	0.4	-0.2	0.5	ally dis."
NORTHERN	4.5	5.4	5.6	5.4	2.4	2.8	4.6	5.3	
SOUTHERN	4.2	5.2	5.3	5.0	2.9	3.1	4.5	5.3	Variable 5 "pronun."
diff.	0.3	0.2	0.3	0.4	-0.5	-0.3	0.1	0.0	
NORTHERN	4.8	5.0	5.4	5.1	5.0	4.1	4.4	6.0	
SOUTHERN	4.2	4.7	4.8	4.8	3.6	3.1	3.7	5.0	Variable 19 "unsure"
diff.	0.6	0.3	0.6	0.3	*1.4	*1.0	0.7	*1.0	

*Regional difference significant ($p < .05$) by direct F test of means.